

Basic MLOE Framework

- Three lines of evidence
 - Represent a continuum from exposure to effect
- Four categories for each LOE
 - Reference
 - Marginal deviation from reference
 - Moderate effect
 - Severe effect

Basic MLOE Framework

- MLOE merged into a station assessment
 - Unimpacted
 - Likely unimpacted
 - Inconclusive
 - Possibly impacted
 - Likely impacted
 - Clearly impacted
- Integration accomplished through classifying all possible combinations
 - All 3 LOE considered together
 - Equal weighting

CHEMISTRY: Moderate Effect

Toxicity

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	Reference	Minor deviation	Moderate effect	Severe effect
Reference	Likely Unimpacted	Possibly Impacted	Likely Impacted	Likely Impacted
Minor Deviation	Possibly Impacted	Possibly Impacted	Likely Impacted	Likely Impacted
Moderate Effect	Likely Impacted	Likely Impacted	Clearly Impacted	Clearly Impacted
Severe Effect	Likely Impacted	Likely Impacted	Clearly Impacted	Clearly Impacted

Alternative MLOE Framework

- SSC recommended investigation of alternative frameworks for assessment of direct effects
- Suggested separation of biological effect and chemical exposure evidence

Two Attributes for Station Assessment

- Severity of biological effect
 - Benthos & toxicity
 - Unaffected
 - Slight effect
 - Moderate effect
 - Large effect
- Potential for chemically-mediated effect
 - Chemistry and toxicity
 - Minimal potential
 - Low potential
 - Medium potential
 - High potential

Severity of Biological Effect

Toxicity

	Reference	Minor Deviation	Moderate Effect	Severe Effect
Reference	Unaffected	Unaffected	Unaffected	Slight Effect
Minor Deviation	Unaffected	Slight Effect	Slight Effect	Moderate Effect
Moderate Effect	Slight Effect	Moderate Effect	Moderate Effect	Moderate Effect
Severe Effect	Moderate Effect	Large Effect	Large Effect	Large Effect

Benthos

Potential for Chemically-Mediated Effect

Toxicity

Chemistry

	Reference	Minor Deviation	Moderate Effect	Severe Effect
Reference	Minimal Potential	Minimal Potential	Low Potential	Low Potential
Minor Deviation	Minimal Potential	Low Potential	Low Potential	Medium Potential
Moderate Effect	Minimal Potential	Medium Potential	Medium Potential	Medium Potential
Severe Effect	Medium Potential	Medium Potential	High Potential	High Potential

Station Assessment Categories

No change from previous framework

- Unimpacted
- Likely Unimpacted
- Possibly Chemically-Impacted
- Likely Chemically-Impacted
- Clearly Chemically-Impacted

Station Assessment

Severity of Effect

Potential
for
Chemically-
Mediated
Effect

	Unaffected	Slight Effect	Moderate Effect	Large Effect
Low Potential	Unimpacted	Unimpacted	Likely Unimpacted	Likely Unimpacted
Small Potential	Unimpacted	Likely Unimpacted	Possibly Impacted	Likely Impacted
Reasonable Potential	Likely Unimpacted	Possibly Impacted	Likely Impacted	Clearly Impacted
High Potential	Likely Unimpacted	Likely Impacted	Clearly Impacted	Clearly Impacted

Discussion

- Does the alternate approach sound reasonable?
 - Suggestions for improvement?
- Does the Advisory Committee have a preference?